

EARTHQUAKE RESISTANT HOUSING FOR THE POOR

Citation

Overseas Over €300,000



When an earthquake struck El Salvador in February 2001, Trócaire initiated a project to rebuild homes employing construction techniques that embraced pre-fabrication, traditional materials, unskilled labour and technical innovations to improve resistance to future earthquakes.

The design quality, simplicity, fitness for purpose, process and execution, belie the sheer scale of the task set, which required an immediate, low cost response to alleviate suffering and provide basic living accommodation to help survivors rebuild their lives and re-establish a community.

Truly a heroic and inspirational fast-track endeavour that rose to the challenge and delivered in every sense of the word.

Architect's Comment

In January and February 2001 earthquakes struck El Salvador with devastating consequences. Over 6,000 people died and more than 218,00 families were left with seriously damaged or totally destroyed homes. Built of traditional materials, adobe and clay tile, with heavy roof timbers, the traditional house could not withstand the tremors. Following a special appeal, and with additional funding from the Development Cooperation Ireland, Trócaire initiated a project to rebuild poor peoples' homes, employing construction techniques that combined traditional materials with technical innovations that would greatly enhance the houses' resistance to future earthquakes.

The technologies employed are simple and cheap - stabilising the adobe (mud and sand) with a small amount of cement; reinforcing the walls with bamboo rods; reinforcing the corners of the building; improving foundations; employing reinforced lintels; lightening the roof structure, and so on. Working with the Department of Architecture at the Central American University, Trócaire has refined these techniques, enabling cheaper modular housing to be constructed in further phases of the housing programme.

At the centre of the project is the involvement of the community in building their own homes. This has required significant commitment in terms of time, training, and community organisation to complete the work. In addition each family has made a small financial contribution according to their means. Each house costs between \$2,000(US) and \$3,000(US).

These three schemes, have given poor families a fresh and secure start in life. The schemes have served as a pilot for other housing developments in El Salvador.

Clients' Comment

On Community Participation

At the beginning we didn't work every day but three days a week but there were always people working in rotation. However a bit later we started to work every day. After the harvest was done, when there was more time, we began working daily.

Interview with Victor Manuel Périz

On the Involvement of Women

The women were set up for work. Between us, we began to dig the soil. We made the adobe bricks mixing the mud. We mixed it for one house then went on to the next, until all were done. We worked the same way the men did. As we had to mix the mud with our feet, a few women even had fever because it was cold and we had never done this before. We were very encouraged. The first house that was made was mine. "OK, here we are all going to learn", we said. All the women were there. We put down the adobe, the tiles and everything. We made the adobe bricks in groups, and each one made his own house.

Interview with Pedrína Carías

On Future Developments

Once we had finished the construction of the houses, we also built 33 latrines. We created a Communal Fund. Each family will give a monthly financial contribution and with this money we will do things to benefit for the whole community.